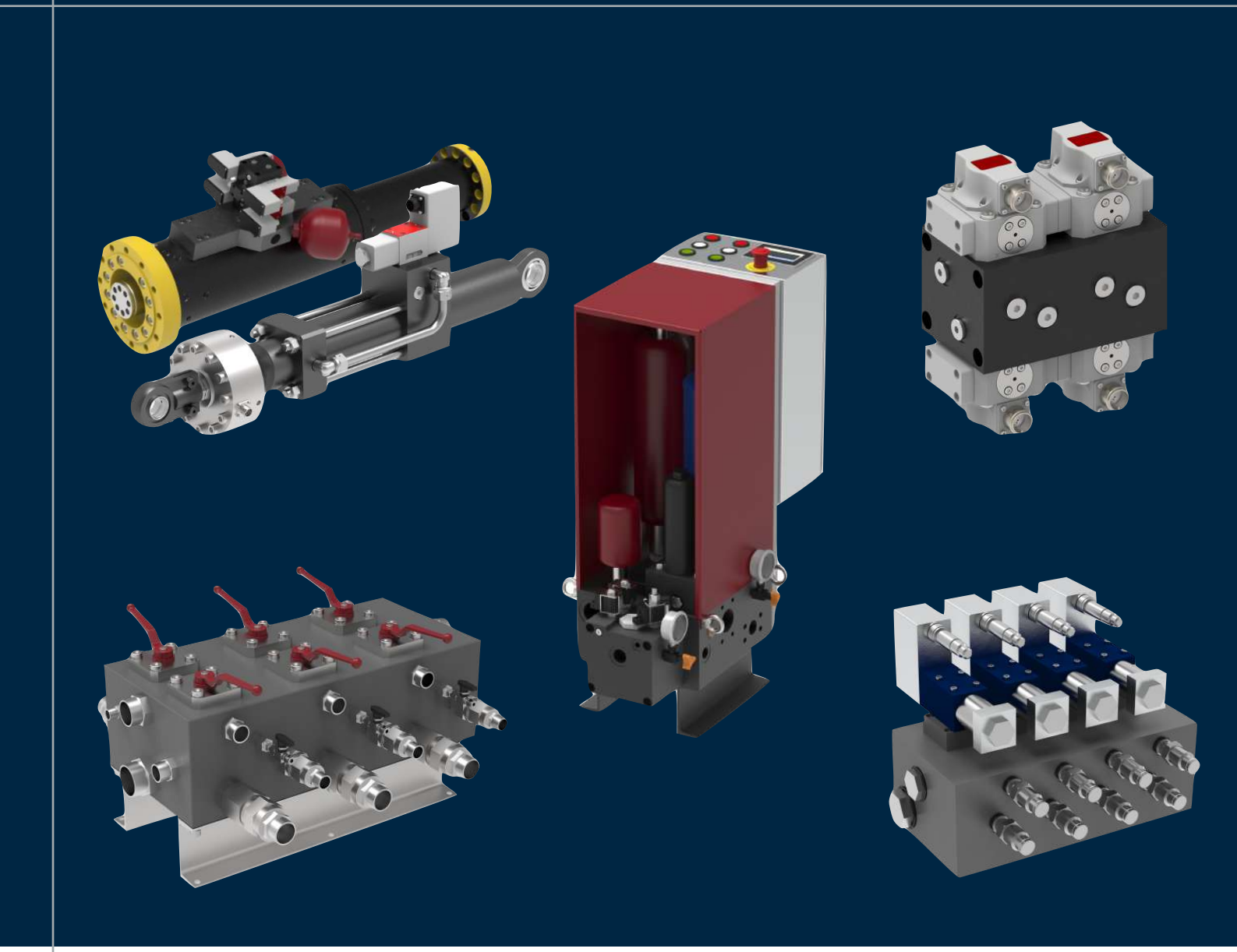
URARTU AERO



Hydraulic Components

Product Overview

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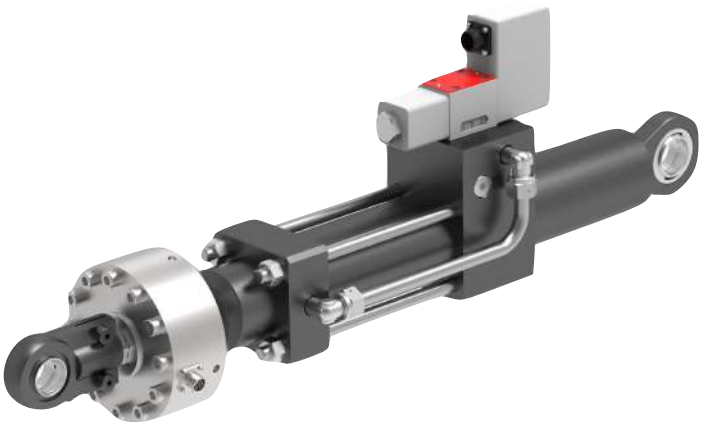
Actuator for Static Testing

Linear hydraulic actuator solutions for static loading of assemblies and units of various industries. The use of a servovalve with feedback allows precision control of force or rod movement.

Features:
- Two-way rod design
- Dampers on both ends of the actuator
- Built-in feedback sensors
- High precision force and position control
- Feedback: pressure, force, displacement, vibration acceleration



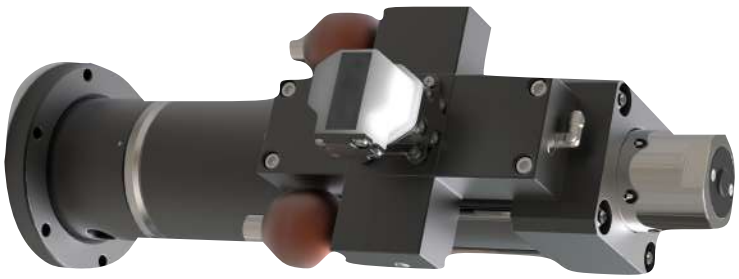
Specification

Rated pressure	[bar]	315
Working fluid		Mineral oil
Working fluid temperature	[°C]	-20 ... +70
Ambient temperature	[°C]	+15 ... +40
Working fluid viscosity	[cSt]	from 10 to 360
Frequency	[Hz]	**up to 3**
Maximum acceleration	[m/s2]	-
Valve		Hydraulic servo valve
Design		Single-rod Double-rod

Actuator for Dynamic Testing

Linear hydraulic drive solutions for dynamic loading when testing assemblies and units of various industries. The use of a servovalve with feedback allows precision control of force or rod movement.

Features:
- Two-way rod design
- Dampers on both ends of the actuator
- Built-in feedback sensors
- High precision force and position control
- Feedback: pressure, force, displacement, vibration acceleration
- High-speed components allowing the actuator rod to move at up to 5 m/s
- Polymer seals are available depending on load frequency



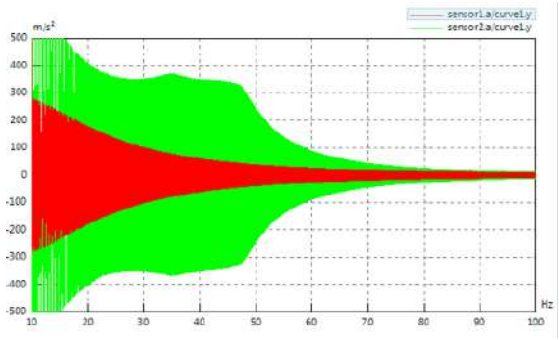
Specification

Rated pressure	[bar]	315
Working fluid		Mineral oil
Working fluid temperature	[°C]	-20 ... +70
Ambient temperature	[°C]	+15 ... +40
Working fluid viscosity	[cSt]	from 10 to 360
Frequency	[Hz]	**up to 40**
Maximum acceleration	[m/s2]	up to 5
Valve		Hydraulic servo valve
Design		Double-rod with polymer/hydrostatic bear-ings

Actuator for Vibration Testing

Linear hydraulic actuator solutions for vibration testing of assemblies and units of various industries. The multi-loop hydraulic servovalve allows precision control of the actuator piston speed, eliminating the effects of auto-oscillation that occurs at high accelerations.
Features:

- Two-way rod design
- Dampers on both ends of the actuator
- Built-in feedback sensors
- High precision force and position control
- Feedback: pressure, force, displacement, vibration acceleration
- High-speed components allowing the actuator rod to move at up to 5 m/s
- Polymer seals are available depending on load frequency



● – actuator with a multicircuit hydraulic servo valve
● – actuator with a standard servo valve

Specification

Rated pressure	[bar]	315
Working fluid		Mineral oil
Working fluid temperature	[°C]	-20 ... +70
Ambient temperature	[°C]	+15 ... +40
Working fluid viscosity	[cSt]	from 10 to 90
Frequency	[Hz]	**up to 600**
Maximum acceleration	[m/s2]	up to 5
Valve		**Multicircuit hydraulic servo valve**
Design		Double-rod with hydrostatic bearings

Hydraulic Service Manifold

Hydraulic Service Manifold (HSM) is installed in the pump station delivery and discharge line upstream the consumer for the service fluid treatment purpose. Service fuel treatment comprises filtration, pressure surge control and hydraulic impact relief.

The HSM control system is standalone. The HSM is controlled via Ethernet or locally in the manual mode. The control system will automatically turn off the HSM and interrupt the service fluid delivery in case of failure in the consumer hydraulic lines or pump station. The real-time monitoring functions allow determining the routine maintenance requirement and ensure annunciation in case of accident.

Features:

- smooth pressure increase and decrease;
- service fluid filtration;
- surge and hydraulic impact relief;
- hydraulic line disconnection in case of breakage;
- pilot pressure control circuit.

Specification

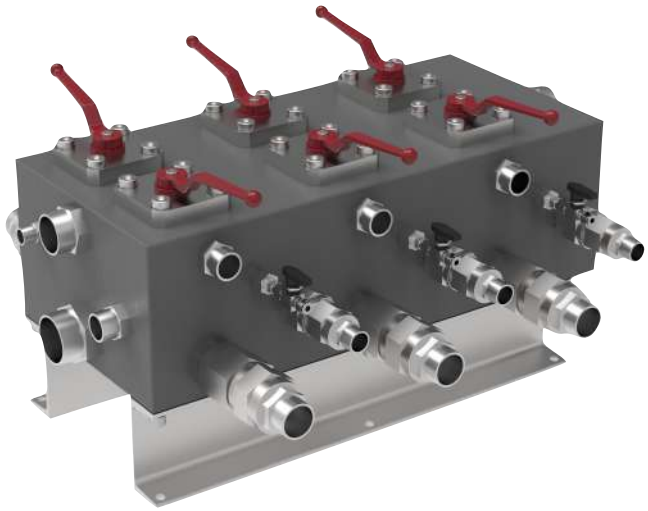
Parameter	Value
Working fluid	Any mineral and synthetic oils
Working fluid viscosity, cSt	6...250
Number of channels	1 / 2
Pressure, bar	315
Flow rate per channel at ΔP=6 bar, l/min	150
Battery	Yes
Filtration fineness in delivery line, μm	10
Filtration fineness in pilot line, μm	3
Power supply, V	220 AC
Working fluid temperature °C	-30...+80
Ambient temperature, °C	-10...+ 40

Optionally:
Delivery line filtration: 10 μm, 3 μm, 5 μm

Hydraulic Distribution Manifold

Hydraulic Distribution Manifold (HDM) is used in hydraulic systems with distributed structure. The HDM manifold is intended for distributing service fluid supplied from the power unit or hydraulic service manifold between consumers. The manifold design allows engaging the required number of channels. The capability of disconnecting particular channels allows consumer service without the need to shutdown the power unit.

Pilot and pressure lines are fitted with ball valves for consumer disconnection during idle time or maintenance. All the discharge and drainage lines are fitted with non-return valves. Channels are provided with fittings for BSP thread high-pressure hose connection.



Features:

- local connection /disconnection of channels;
- installation simplicity;
- structural reliability;
- service maintenance comfort;
- low hydraulic losses at maximum service fluid flow rate.

Specification

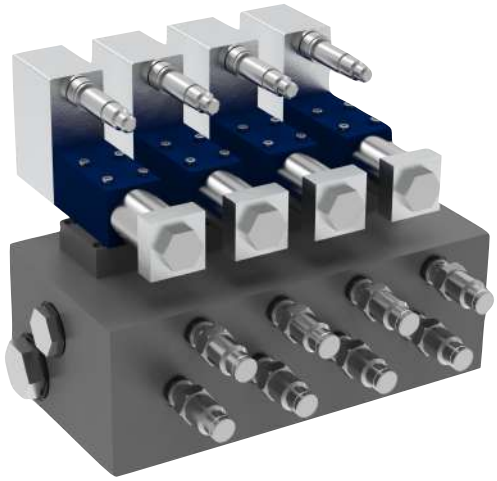
Parameter	Value
Working fluid	Any types of mineral and synthetic oils/fuel
Working fluid viscosity, cSt	1...250
Rated diameter of pressure line, mm	15...40
Rated diameter of discharge line, mm	19...50
Number of channels (ports)	2....6
Operating pressure, bar	350
Working fluid temperature, °C	-30 ... 120

Hydraulic Control Manifold

Hydraulic Control Manifold is installed in hydraulic loading systems and ensures the necessary control of loading parameters over a long time period using the direct-acting servo control valves. This approach allows regulating pressure and service fluid delivery to hydraulic actuator in proportion to the control signal. The manifold structure allows ensuring the decreased hysteresis and a high stability.

If pressure feedback is needed to be implemented, pressure sensors with standardized output signal 4...20 mA are installed in the HSM.

Servo control valves are controlled by the external control signal ±10 V.



Features:
- installation simplicity;
- structural reliability;
- service maintenance comfort;
- accurate pressure or flow rate adjustment.

Specification

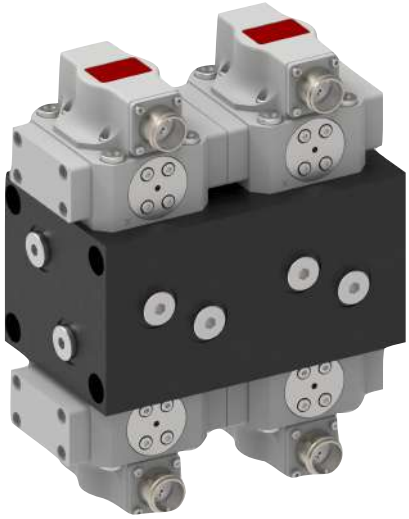
Parameter	Value
Working fluid	Mineral and synthetic oil
Working fluid viscosity, cSt	6...80
Pressure, bar	350
Number of channels	4
Distributor type	4/3
Flow rate per channel at (ΔP=70 bar) l/min	up to 40
Control signal, V	± 10
Feedback sensor signal, mA	4...20
Working fluid temperature, °C	-20...80

Optionally:
- Installation of pressure sensors with a standardized output signal 4...20mA; 0...10 V
- Number of channels from 1 to 4

Servo Valve Manifold

Servo Valve Manifold is used in hydraulic loading system and is directly installed on the **cylinder**. Its design provides for a surge damping valve as well as an opportunity of connecting pressure transducers. Service fluid flow to the actuating device is directly proportional to the control signal.

Servo Valve Manifold allows high-frequency loading.



Features:
- not depending on the pressure drop;
- minimal hysteresis;
- high stability.

Specification

Parameter	Value
Working fluid	Mineral and synthetic oil
Working fluid viscosity, cSt	6...80
Pressure, bar	315
Flow rate per channel at (ΔP=70 bar) l/min	up to 63
Control signal, V	± 10
Working fluid temperature, °C	-30...200

Optionally:
- Service fluid flow rate – 4, 10, 19, 38, 63 l/min

+ 41 21 552 12 64

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